PROCEEDINGS OF THE CLUB

Wednesday, October 28, 1903

The club met at the New York Botanical Garden at 3:30 P. M.; twenty-six persons present; Dr. Britton in the chair.

Mr. Kenneth K. Mackenzie, of East Orange, N. J., was elected to membership.

Dr. MacDougal called attention to the abnormal fall-blooming of certain plants. In one case mentioned the spring flowering was retarded till fall, owing to the proximity of a mass of ice, this being a case of retarded development. He exhibited also plants with flowers now open that should not normally open till next spring, this being accelerated development caused by the prevailing climatic conditions.

Dr. Britton exhibited two forms of the common marsh mallow, one with pink flowers the other with white flowers with a crimson center. The first is the well-known *Hibiscus Moschentos* L. The second form is not uncommon in various localities, but has been considered merely a color variation. Recently it has been observed that the fruits of the two forms are very different, showing that they should be considered distinct species. Drawings of the fruits were exhibited. No name has as yet been proposed for the white-flowered form.

Dr. Burton E. Livingston spoke on "The Influence of Osmotic Pressure on the Cell." One of the widely accepted theories of the action of osmotic pressure is that it is comparable to gas pressure. It can act, however, only in the presence of water. Soluble salts tend to diffuse throughout a given volume of water just as gases do in a confined space. In cellular tissue there is no break in the water connection, since the cell-wall is permeable by water and by the salts dissolved in it. The protoplasmic lining of the cell is, however, only semi-permeable, since it allows the passage of some substances while preventing that of others. When living cells are transferred from a dilute medium to a denser one, the tendency is for them to lose part of the water they contain. The cell contents thus become more or less shrivelled; conversely,

when a cell is transferred to a more dilute medium it swells and becomes more turgid. Strong solutions tend to check vital activity. Removal to a dense medium often materially alters the form of growth of an organism, the tendency being to assume short thick forms in the dense medium and longer and more slender forms in the dilute one. With different substances that are not poisonous the cell seems to give the same response when a strength of each is used that would exert the same osmotic pressure, showing that it is the pressure and not the character of the substance that produces the effect. The extraction of water from the cell means the concentration of the solution of all the various salts and other dissolved substances that are contained in it. Varying strengths of the same salt are known to affect the growth of plants very diversely, and this suggests an interesting field for further investigation.

The paper brought out an interesting discussion as to the probable effect on the aquatic vegetation of a gradual change from fresh- to salt-water conditions, or *vice versa*.

Mr. Earle discussed "Generic Limits among the Agaricaceae." He called attention to the artificial character of the genera that are now recognized and the unnatural grouping of species that resulted from the use of only two or three characters as the bases of genera. A more natural grouping would require that the sum total of all the characters should be considered in defining genera.

F. S. Earle,
Secretary.

Tuesday, November 10, 1903

This meeting was held at the College of Pharmacy at 8 p. m.; Dr. Murrill in the chair; twenty-three persons present.

The committee on admissions reported favorably on the names of Miss Theresa G. Williamson and Dr. Phil. Voelkel, and they were elected members of the Club.

Mrs. Cunningham, of California, a prominent organizer in that state of clubs for the preservation of wild flowers, was present and by request exhibited a large collection of water-color sketches of Californian wild flowers and spoke briefly of the best places and seasons for finding them.

The first regular paper of the evening was by Dr. Underwood on "The Botanical Gardens of Jamaica." He outlined the history and described the present condition of each of the four public gardens of Jamaica, illustrating his remarks with numerous photographs. The first garden established was at Bath, in 1779. This is at the eastern end of the island where the climate is hot and very humid. It was virtually abandoned many years ago, but a number of interesting trees are still standing. The location was not fully satisfactory, and in 1863 another garden was established at Castleton in the Wag Water Valley, twenty-five miles north of Kingston. This is now probably the finest and most interesting botanical garden in the West Indies. It contains a very notable collection of palms, said to include 180 species. In 1868, another garden was established at Cinchona on one of the spurs of the Blue Mountain range at an elevation of nearly 5,000 feet. It was intended to test the practicability of the growing of cinchona for its bark on a commercial scale, but many other trees and plants adapted to high altitudes in the tropics were planted and for some years it was the headquarters for the botanical work of the island. Owing to its inaccessibility still another garden was established in 1873 at the Hope plantation in the outskirts of Kingston on the south side of the island. This is now the headquarters for the botanical and agricultural departments of Jamaica, and besides its features as a botanical garden proper it is used as a nursery for propagating economic plants for distribution to the planters of the island and as an agricultural experiment station for the investigation of various agricultural problems.

The second paper was by Dr. Howe on "The Flowering of the Adirondack Lakes," a phenomenon caused by the growth of one of the minute blue-green algae, specimens of which were exhibited. The substance of this paper appeared in the October issue of TORREYA.

Dr. Britton spoke of the recent discovery by Mrs. Goodrich at Syracuse of *Phacelia dubia*, a plant new to the New York State flora. This discovery extends the known range of the plant several hundred miles to the northward.

On motion, the thanks of the Club were voted Mrs. Cunningham for her interesting exhibition of flower paintings.

F. S. Earle,
Secretary.

NEWS ITEMS

We learn from *Science* that Dr. E. B Copeland, recently instructor in Stanford University, sailed for Manila in November to become chief botanist for the United States Philippine Commission.

Dr. George T. Moore, of the Bureau of Plant Industry, United States Department of Agriculture, is spending a month in bacteriological studies in Dr. Winogradsky's laboratory in St. Petersburg.

Mr. J. A. Shafer, recently of the Carnegie Museum, Pittsburgh, Pa., has been appointed custodian of the museums of the New York Botanical Garden, and began his new duties on November 16.

Mr. Roland M. Harper is spending two or three months in Georgia, engaged in making collections of trees and woods for the State exhibit at the Louisiana Purchase Exposition at St. Louis.

Mr. C. L. Shear, of the Bureau of Plant Industry, Washington, D. C., Mr. William R. Maxon, of the U. S. National Herbarium, and Professor A. D. Selby, of the Ohio Agricultural Experiment Station, have been devoting a month to carrying on special researches at the New York Botanical Garden.

A new botanical serial, "Leaflets of Botanical Observation and Criticism," by Professor Edward L. Greene, of the Catholic University of America, made its appearance in November. The first number contains articles under the following titles, "Distribution of *Bidens vulgata*," "A new southern Violet," "In the wrong Genus," "Further Segregates from *Aster*," "Neglected Eupatoriaceous Genera," and "The Logic of it," the latter covering comments on Dr. Barnhart's remarks on "Duplicate Binomials," published in the September Torreya.